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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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George R. Borden IV

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EXAMINER

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ART UNIT

PAPER NUMBER

2173

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/627,345		BORDEN, GEORGE R.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Michael Roswell		2173	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 11, 12, 15, 19-22, 25, 29, and 30 are rejected under 35 U.S.C. 103(a) as being anticipated by Vallone et al (US Patent 6,642,939), hereinafter Vallone, Peterson et al (US Patent 5,652,714), hereinafter Peterson, and IBM Research Disclosure Number 41878, Published February 1999, hereinafter IBM-41878.

Regarding claim 11, Vallone teaches a first input for navigating upward through a hierarchical structure, a second input for navigating downward through the hierarchical structure (both taught as the use of a remote control of Fig. 14 for navigating a displayed list upwards and downwards, at col. 15, lines 32-46, the lists being displayed in Figs. 16-19), a first aural signal associated with a first input having a first characteristic indicating to a user upward navigation through the hierarchical structure, the first characteristic independent of the set of data from which upward navigation commences, and a second aural signal associated with a second input having a second characteristic indicating to a user downward navigation through the hierarchical structure, the second characteristic independent of the set of data from which downward navigation commences (taught as the generation of transitional sounds in response to a user navigating the interface with the remote control, at col. 24, lines 49-55, and col. 8, lines 37-40).

However, Vallone fails to explicitly teach the second characteristic being audibly different from the first audio characteristic, both signals being from an arbitrary data point.

Peterson teaches a mechanism for manipulating transient events within a multimedia product, similar to the transition events of Vallone. Furthermore, Peterson teaches assigning sounds to “next state” and “previous state” tools, at col. 27, lines 31-35 and lines 43-52. It is well within the bounds of Peterson to assign the same sound to all “next state” tools and the same sound to all “previous state” tools.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Vallone and Peterson before him at the time the invention was made to modify the transitional sounds of Vallone to include the differentiation between “next state” and “previous state” transitions and their associated sounds, as taught by Peterson.

One would have been motivated to make such a combination for the advantage of allowing a user to easily identify which direction navigation is taking place within the hierarchy.

Furthermore, Vallone and Peterson fail to explicitly teach frequency ranges associated with the first and second aural signals that are dependent on the size of the data set comprising the hierarchical set of data.

IBM-41878 teaches a method for navigating a hierarchal structure, most notably web pages, similar to the method of Vallone and Peterson. IBM-41878 also teaches frequency ranges associated with aural signals that are dependent on the size of the data set comprising the hierarchical set of data, taught as the use of a variable audio tone used to indicate the size of the displayed scrollable content to the user.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Vallone, Peterson, and IBM-41878 before him at the time the invention was made to modify the aural interface for navigating the hierarchical structure of Vallone and Peterson to include the content size aural indicator of IBM-41878.

One would have been motivated to make such a combination for the advantage of allowing a visually impaired user to tell the size of the page. See IBM-41878, ¶ 2.

Regarding claim 12, Vallone teaches the first and second inputs being respective buttons, taught as the use of the buttons on a remote control for navigating the user interface, at col. 8, lines 37-40.

Regarding claim 15, Vallone teaches a third aural signal indicating to a user that an outer boundary of the hierarchical structure has been reached, taught as the generation of a warning sound that indicates to a user that they have attempted an action that is not allowed, such as moving the highlight bar to an area that does not exist, at col. 24, lines 49-55.

Regarding claim 19, Vallone teaches organizing the collection of data into a plurality of levels, each level including an associated hierarchical structure, taught as the navigation by the user through multiple interface levels, at col. 15, lines 32-46, and seen at Figs. 16-19.

Regarding claim 20, Vallone teaches including a third aural signal indicating to a user navigation to a different level, taught as the generation of transitional sounds in response to a user navigating the interface with the remote control, at col. 24, lines 49-55, and col. 8, lines 37-40, the levels being shown at col. 15, lines 32-46.

Regarding claim 21, Vallone teaches a first input for navigating from a current level to a sublevel of the current level, a second input for navigating from a current sublevel to the level (both taught as the use of a remote control of Fig. 14 for navigating a displayed list to different

levels, using the "left" and "right" buttons, at col. 15, lines 32-46, the lists being displayed in Figs. 16-19), a first aural signal associated with a first input having a first characteristic indicating to a user navigation from a current level to a sublevel of the current level, the first characteristic independent of the set of data from which level navigation commences, and a second aural signal associated with a second input having a second characteristic indicating to a user navigation from a sublevel of the current level to the current level, the second characteristic independent of the set of data from which sublevel navigation commences (taught as the generation of transitional sounds in response to a user navigating the interface with the remote control, at col. 24, lines 49-55, and col. 8, lines 37-40).

However, Vallone fails to explicitly teach the second characteristic being audibly different from the first audio characteristic, both signals being from an arbitrary data point.

Peterson teaches a mechanism for manipulating transient events within a multimedia product, similar to the transition events of Vallone. Furthermore, Peterson teaches assigning sounds to "next state" and "previous state" tools, at col. 27, lines 31-35 and lines 43-52. It is well within the bounds of Peterson to assign the same sound to all "next state" tools and the same sound to all "previous state" tools.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Vallone and Peterson before him at the time the invention was made to modify the transitional sounds of Vallone to include the differentiation between "next state" and "previous state" transitions and their associated sounds, as taught by Peterson.

One would have been motivated to make such a combination for the advantage of allowing a user to easily identify which direction navigation is taking place within the hierarchy. IBM-41878 teaches a method for navigating a hierarchal structure, most notably web pages, similar to the method of Vallone and Peterson. IBM-41878 also teaches frequency ranges

associated with aural signals that are dependent on the size of the data set comprising the hierarchical set of data, taught as the use of a variable audio tone used to indicate the size of the displayed scrollable content to the user.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Vallone, Peterson, and IBM-41878 before him at the time the invention was made to modify the aural interface for navigating the hierarchical structure of Vallone and Peterson to include the content size aural indicator of IBM-41878.

One would have been motivated to make such a combination for the advantage of allowing a visually impaired user to tell the size of the page. See IBM-41878, ¶ 2.

Regarding claim 22, Vallone teaches the first and second inputs being respective buttons, taught as the use of the buttons on a remote control for navigating the user interface, at col. 8, lines 37-40.

Regarding claim 25, Vallone teaches a third aural signal indicating to a user that an outer boundary of the hierarchical structure has been reached, taught as the generation of a warning sound that indicates to a user that they have attempted an action that is not allowed, such as moving the highlight bar to an area that does not exist, at col. 24, lines 49-55.

Regarding claim 29, Vallone teaches organizing the collection of data into a plurality of levels, each level including an associated hierarchical structure, taught as the navigation by the user through multiple interface levels, at col. 15, lines 32-46, and seen at Figs. 16-19.



Regarding claim 20, Vallone teaches including third and fourth aural signals indicating to a user navigation upwards and downwards through the hierarchical structure, taught as the generation of transitional sounds in response to a user navigating the interface with the remote control, at col. 24, lines 49-55, and col. 8, lines 37-40, the levels being shown at col. 15, lines 32-46.

Claims 13, 14, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vallone, Peterson, IBM-41878, and Auflick et al (US Patent 6,820,238), hereinafter Auflick.

Regarding claims 13 and 23, Vallone, Peterson and IBM-41878 teach an aural user interface for generating aural signals in response to user navigation in various directions through a hierarchical structure.

However, Vallone, Peterson and IBM-41878 fail to explicitly teach the first and second inputs for such navigation being opposite sides of a rocker switch.

Auflick teaches a method for the navigation of a multimedia player with a hierarchical structure, as shown in Figs. 3 and 4. Furthermore, Auflick teaches the use of a directory rocker switch for navigating through the different directories in the hierarchical structure, at col. 3, lines 18-20.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Vallone, Peterson, IBM-41878 and Auflick before him at the time the invention was made to modify the aural interface of Vallone, Peterson, and IBM-41878 to include the navigation by a rocker switch of Auflick in order to obtain a user interface that responds to user input by a rocker switch with aural output.

One would be motivated to make such a combination for the advantage of the small size and ease of use afforded by a rocker switch.



Regarding claims 14 and 24, while Vallone, Peterson, IBM-41878 and Auflick have been shown to teach navigating an aural interface using a rocker switch, they both fail to explicitly teach continuous incremental navigation caused by constant depression of one side of the rocker switch. However, it is notoriously well known in the art to continuously navigate a list or hierarchical structure by way of constant depression of a button or switch, as such has been implemented in various remote controls, televisions, compact disc players, and the like. The examiner takes OFFICIAL NOTICE of these teachings. Therefore, it would have been obvious to one of ordinary skill in the art to modify the aural interface of Vallone, Peterson and Auflick to include continuous navigation by way of constant button depression, for the ease of use provided by a single button press.

Claims 16 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vallone, Peterson and IBM-41878.

Vallone, Peterson and IBM-41878 teach an aural user interface for generating aural signals in response to user navigation in various directions through a hierarchical structure. Vallone and Peterson fail to explicitly teach the first characteristic of a first aural signal being identical to the second characteristic of the second aural signal. However, it is notoriously well known in the art to output the same sound for similar navigational or scrolling functions, as is found in Microsoft Internet Explorer's "Back" and "Forward" buttons, and in the navigational directional pads for many cell phones. The examiner takes OFFICIAL NOTICE of these teachings. Therefore, it would have been obvious to one of ordinary skill in the art to modify the aural interface of Vallone to include similar first and second characteristics for the first and

second aural signals, respectively. One would have been motivated to make such a combination for the advantage of notifying the user that their selected action is of a common type with a similar action, such as back/forward and up/down navigation operations.

Claims 17, 18, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vallone, Peterson, IBM-41878 and McKiel, Jr. (US Patent 5,287,102), hereinafter McKiel.

Regarding claims 17 and 27, Vallone, Peterson and IBM-41878 teach an aural user interface for generating aural signals in response to user navigation in various directions through a hierarchical structure.

Vallone, Peterson and IBM-41878 fail to explicitly teach first and second aural signals having a location characteristic indicating to a user the relative position within the hierarchical structure of a selected data set.

McKiel teaches a method for aurally indicating user actions upon a hierarchical structure. Furthermore, McKiel teaches indicating to a user the relative position within the hierarchical structure of a selected data set, taught as the use of distinctive sounds or chords to notify the user of their location, at col. 5, lines 44-58.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Vallone, Peterson, IBM-41878 and McKiel before him at the time the invention was made to modify the aural interface of Vallone, Peterson and IBM-41878 to include the locational aural information of McKiel in order to obtain an aural interface capable of notifying to a user their location within a hierarchy.

One would be motivated to make such a combination for the advantage of allowing a blind or visually impaired user to readily locate graphical elements on an interface. See McKiel, col. 3, lines 58-66.

Regarding claims 18 and 28, McKiel teaches the location characteristic of first and second aural signals being the frequency of the first and second characteristics, taught as the varying of sound output frequency based on the positional location of a user in a hierarchy, at col. 3, lines 57-65.

### ***Response to Arguments***

Applicant's arguments with respect to claims 11-30 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2173

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Roswell whose telephone number is (571) 272-4055. The examiner can normally be reached on 8:30 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael Roswell  
7/19/2006

**TADESSE HAILU**  
**Patent Examiner**

